

Title (en)

Debug peripheral for microcomputers, microprocessors and core processor integrated circuits and system using the same

Title (de)

Fehlersuchperipherie für Mikrorechner, Mikroprozessoren und Kernprozessor beinhaltende integrierte Schaltungen und Vorrichtung die diese Fehlersuchperipherie verwendet

Title (fr)

Périphérique de mise au point pour microcalculateurs, microprocesseurs et circuits intégrés à processeur noyau ("core processor") et système utilisant ledit périphérique

Publication

EP 0391173 B1 19960619 (EN)

Application

EP 90105548 A 19900323

Priority

US 33213089 A 19890403

Abstract (en)

[origin: EP0391173A2] A debug peripheral (16) is provided for real-time in-circuit emulation for high speed microcontrollers and microprocessors. The debug peripheral (16) is a single-word dual-port memory with parallel read-write access on one side, and synchronous, full-duplex serial read-write access on the other side. A shift register (22) in the debug peripheral (16) functions as an instruction memory for a core central processing unit (CPU) (12). Three-pins (28,30,32) on the debug peripheral (16) provide the serial interface to an external development system, while parallel access is via a normal connection to the CPU internal bus (18). The debug peripheral (16) is addressed at a number of adjacent locations in the CPU (12) memory space. During emulation (debug) mode, the CPU (12) fetches instructions from the debug peripheral (16), rather than the memory (14). Instructions are serially loaded into the shift register (22) from the development system, via the serial interface, and transferred to the CPU via the parallel interface.

IPC 1-7

G06F 11/00

IPC 8 full level

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CPC (source: EP KR US)

G06F 11/28 (2013.01 - KR); **G06F 11/3656** (2013.01 - EP US)

Cited by

EP0942374A1; EP0569969A1; EP0942371A1; EP0588473A1; US5390332A; EP1016969A3; GB2582790A; GB2582790B; US6708270B1; US6389498B1; US6457124B1; US6598176B1; US11775415B2

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